CIVIL QUALITY CONSULTANTS & ENGINEERS

(Buildings Geo-Tech & Highway Materials Testing Laboratory)
An ISO 9001: 2015 Certified Company
NABL Accredited As Per ISO/IEC : 17025:2005 Laboratory

JAS-ANZ
ISO 9001:2000 CERTIFIED

Job No.: CQCE/BBMP/MSV/QC/2018-19 Date: 27.03.2019

KERB STONE (CORE) TEST REPORT

Client	:	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Agency	:	**Sri. M S Venkatesh,** Contractor, Bangalore.
Name of Work	:	Improvements of re-asphalting Dasarahalli Main Road & other Roads , S Ramaiash, Ganesha Sawmill, Kempegowda Nagara & Maheshwari Nagara Roads Construction drain and Concrete Main roads &Cross roads of Vidyanagara Dasarahalli Ward No:15&39 (6-works) Package No. DZ 2017-18-(05), BBMP, Bangalore.
Name of Road	:	Improvements of re-asphalting Kempegowda Nagara & Maheshwari Nagara Roads Dasarahalli ward no.15.
No.of Sample Tested	:	03
Date of Testing	:	27.03.2019
Technical Reference	:	IS:516-1959 (Reaffirmed 1999), SP-24:1983.
Grade of Concrete	:	M_{15}

Sl. No.	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	50.00	70.00	0.319	2320.93	1.40	0.960	26.80	13.65	14.74	14.15	17.69
2	50.00	72.00	0.336	2376.71	1.44	0.960	25.60	13.04	14.08	13.52	16.90
3	50.00	71.00	0.332	2381.50	1.42	0.960	27.10	13.80	14.91	14.31	17.89

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported reported within 30 days from the date of testing.

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Authorised Signatory

ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ದಾಸರಹಳ್ಳಿ ಉಪ ವಿಭಾಗ
ಬಾಗಲಗುಂಟೆ, ಬಿಬಿಎಂಪಿ
ಬೆಂಗಳೂರು

Office & Laboratory : # 133, Bhuvaneshwarinagar, Dodda Basti Main Road, Bangalore - 560 056.
e-mail:civilqualityconsultants@gmail.com Ph: 080-23240644 / Mob: 8553518550

Scanned by CamScanner

CIVIL QUALITY CONSULTANTS & ENGINEERS

(Buildings Geo-Tech & Highway Materials Testing Laboratory)
An ISO 9001: 2015 Certified Company
NABL Accredited As Per ISO/IEC : 17025:2005 Laboratory

JAS-ANZ
ISO 9001:2000 CERTIFIED

Job No.: CQCE/BBMP/MSV/QC/2018-19 Date: 15.02.2019

PRECAST SLAB 100mm Thick(CORE) TEST REPORT

Client	:	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Contractor	:	**Sri. M S Venkatesh,** Contractor, Bangalore.
Name of Work	:	Improvements of re-asphalting Dasarahalli Main Road & other Roads , S Ramaiash, Ganesha Sawmill, Kempegowda Nagara & Maheshwari Nagara Roads Construction drain and Concrete Main roads &Cross roads of Vidyanagara Dasarahalli Ward No:15&39 (6-works) Package No. DZ 2017-18-(05), BBMP, Bangalore.
Name of Road	:	Improvements of re-asphalting Kempegowda Nagara & Maheshwari Nagara Roads Dasarahalli ward no.15.
No.of Sample Tested	:	03
Date of Testing	:	15.02.2019
Techinical Reference	:	IS:516-1959 (Reaffirmed 1999), SP-24:1983.
Grade of Concrete	:	M_{20}

Sl. No.	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	50.00	81.00	0.372	2338.99	1.62	0.960	32.60	16.60	17.93	17.21	21.52
2	50.00	83.00	0.386	2368.53	1.66	0.960	34.50	17.57	18.98	18.22	22.77
3	50.00	85.00	0.399	2390.69	1.70	0.960	33.90	17.27	18.65	17.90	22.38

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported reported within 30days from the date of testing.

For CIVIL QUALITY CONSULTANTS & ENGINEERS

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ದಾಸರಹಳ್ಳಿ ಉಪ-ವಿಭಾಗ
ಬಾಗಲಗುಂಟೆ. ಬಿಬಿಎಂಪಿ
ಬೆಂಗಳೂರು

Authorised Signatory

Office & Laboratory : # 133, Bhuvaneshwarinagar, Dodda Basti Main Road, Bangalore - 560 056.
e-mail:civilqualityconsultants@gmail.com Ph: 080-23240644 / Mob: 8553518550

Scanned by CamScanner

CIVIL QUALITY CONSULTANTS & ENGINEERS

(Buildings Geo-Tech & Highway Materials Testing Laboratory)
An ISO 9001: 2015 Certified Company
NABL Accredited As Per ISO/IEC : 17025:2005 Laboratory

JAS-ANZ
ISO 9001:2000 CERTIFIED

Job No.: CQCE/BBMP/MSV/QC/2018-19

Date: 15.02.2019

PRECAST SLAB 250mm Thick(CORE) TEST REPORT

Client	:	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Contractor	:	**Sri. M S Venkatesh,** Contractor, Bangalore.
Name of Work	:	Improvements of re-asphalting Dasarahalli Main Road & other Roads , S Ramaiash, Ganesha Sawmill, Kempegowda Nagara & Maheshwari Nagara Roads Construction drain and Concrete Main roads &Cross roads of Vidyanagara Dasarahalli Ward No:15&39 (6-works) Package No. DZ 2017-18-(05), BBMP, Bangalore.
Name of Road	:	Improvements of re-asphalting Kempegowda Nagara & Maheshwari Nagara Roads Dasarahalli ward no.15.
No.of Sample Tested	:	03
Date of Testing	:	15.02.2019
Techinical Reference	:	IS:516-1959 (Reaffirmed 1999), SP-24:1983.
Grade of Concrete	:	M_{20}

Sl. No.	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	100.00	133.00	2.468	2362.67	1.33	0.960	133.60	17.01	18.37	17.64	22.05
2	100.00	135.00	2.536	2391.80	1.35	0.960	132.80	16.91	18.26	17.53	21.91
3	100.00	134.00	2.512	2386.85	1.34	0.960	134.90	17.18	18.55	17.81	22.26

Note:
1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported reported within 30days from the date of testing.

For CIVIL QUALITY CONSULTANTS & ENGINEERS

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಡಿ ದಾಸರಹಳ್ಳಿ ಉಪ-ವಿಭಾಗ
ಬಾಗಲಗುಂಟೆ, ಬಿಬಿಎಂಪಿ
ಬೆಂಗಳೂರು

Authorised Signatory

Office & Laboratory : # 133, Bhuvaneshwarinagar, Dodda Basti Main Road, Bangalore - 560 056.
e-mail:civilqualityconsultants@gmail.com Ph: 080-23240644 / Mob: 8553518550

Scanned by CamScanner

CIVIL QUALITY CONSULTANTS & ENGINEERS

(Buildings Geo-Tech & Highway Materials Testing Laboratory)
An ISO 9001: 2015 Certified Company
NABL Accredited As Per ISO/IEC : 17025:2005 Laboratory

JAS-ANZ
ISO 9001:2000 CERTIFIED

Job No.: CQCE/BBMP/MSV/QC/2018-19 Date : 28.02.2019

GRADATION FOR WMM
MORTH TABLE-400-11

Client : **Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.

Agency : **Sri. M S Venkatesh,** Contractor, Bangalore.

Name of Work : Improvements of re-asphalting Dasarahalli Main Road & other Roads , S Ramaiash, Ganesha Sawmill, Kempegowda Nagara & Maheshwari Nagara Roads Construction drain and Concrete Main roads &Cross roads of Vidyanagara Dasarahalli Ward No:15&39 (6-works) Package No. DZ 2017-18-(05), BBMP, Bangalore.

Name of Road : Improvements of re-asphalting Kempegowda Nagara & Maheshwari Nagara Roads Dasarahalli ward no.15.

Date of Testing : 28.02.2019

Material Type : Wet Mix Macadam

Oven Dry Wt (gm): **10000**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	258	258	2.6	97.4	95-100
22.4	2530	2788	27.9	72.1	60-80
11.2	2756	5544	55.4	44.6	40-60
4.75	1583	7127	71.3	28.7	25-40
2.36	1036	8163	81.6	18.4	15-30
0.600	398	8561	85.6	14.4	8-22
0.075	904	9465	94.7	5.3	0-8

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL QUALITY CONSULTANTS & ENGINEERS

ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬಿ.ಡಾನರಹಳ್ಳಿ ಉಪ-ವಿಭಾಗ
ಬಾಗಲೂರು, ಬೆಂಗಳೂರು

Authorised Signatory

Office & Laboratory : # 133, Bhuvaneshwarinagar, Dodda Basti Main Road, Bangalore - 560 056.
e-mail:civilqualityconsultants@gmail.com Ph: 080-23240644 / Mob: 8553518550

Scanned by CamScanner

CIVIL QUALITY CONSULTANTS & ENGINEERS

(Buildings Geo-Tech & Highway Materials Testing Laboratory)
An ISO 9001: 2015 Certified Company
NABL Accredited As Per ISO/IEC : 17025:2005 Laboratory

JAS-ANZ
ISO 9001:2000 CERTIFIED

Job No.: CQCE/BBMP/MSV/QC/2018-19

Date: 28.02.2019

Aggregate Impact Value

IS: 2386 Part IV

Client	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Agency	**Sri. M S Venkatesh,** Contractor, Bangalore.
Name of the Work	Improvements of re-asphalting Dasarahalli Main Road & other Roads , S Ramaiash, Ganesha Sawmill, Kempegowda Nagara & Maheshwari Nagara Roads Construction drain and Concrete Main roads &Cross roads of Vidyanagara Dasarahalli Ward No:15&39 (6-works) Package No. DZ 2017-18-(05), BBMP, Bangalore.
Name of road	Improvements of re-asphalting Kempegowda Nagara & Maheshwari Nagara Roads Dasarahalli ward no.15.
Type of Mix	Wet Mix Macadam
Date of Testing	28.02.2019

Sl No.	Details	Trial No. 1	Trial No. 2	Trial No. 3	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	376	378	380	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	83	85	87	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	293	293	293	
4	Aggregate Impact value = percent fines $100^* (W_2/W_1)\%$	22.07	22.49	22.89	22.49

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

Note:

→ This test report should not be reproduced except in full, without written approval of the laboratory
→ The results indicated above are based on the tests carried out on the samples received in the laboratory
→ Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL QUALITY CONSULTANTS & ENGINEERS

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಶ್ರೀ ದಾಸರಹಳ್ಳಿ ಉಪ-ವಿಭಾಗ
ಬಾಗಲಗುಂಟೆ, ಬಿಬಿಎಂಪಿ
ಬೆಂಗಳೂರು

Authorised Signatory

Scanned by CamScanner

CIVIL QUALITY CONSULTANTS & ENGINEERS

(Buildings Geo-Tech & Highway Materials Testing Laboratory)
An ISO 9001: 2015 Certified Company
NABL Accredited As Per ISO/IEC : 17025:2005 Laboratory

JAS-ANZ
ISO 9001:2000 CERTIFIED

Job No.: CQCE/BBMP/MSV/QC/2018-19 28.02.2019

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Agency	**Sri. M S Venkatesh,** Contractor, Bangalore.
Name of Work	Improvements of re-asphalting Dasarahalli Main Road & other Roads , S Ramaiash, Ganesha Sawmill, Kempegowda Nagara & Maheshwari Nagara Roads Construction drain and Concrete Main roads &Cross roads of Vidyanagara Dasarahalli Ward No:15&39 (6-works) Package No. DZ 2017-18-(05), BBMP, Bangalore.
Name of Road	Improvements of re-asphalting Kempegowda Nagara & Maheshwari Nagara Roads Dasarahalli ward no.15.
Technical Reference	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Wet Mix Macadam
Sample ID	WMM Layer
Date of Testing	28.02.2019

Result : Flakiness Index = **11.85%**

Elongation Index = **13.65%**

Result : Combined Flakiness & Elongation index **25.50%**

Comments:

Maximum allowable Flakiness & Elongation Index for Wet Mix Macadam is 30%

Note:

→ This test report should not be reproduced except in full, without written approval of the laboratory
→ The results indicated above are based on the tests carried out on the samples received in the laboratory
→ Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Authorised Signatory

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬ ದಾಸರಹಳ್ಳಿ ಉಪ-ವಿಭಾಗ
ಬಾಗಲಗುಂಟೆ, ಬಿಬಿಎಂಪಿ
ಬೆಂಗಳೂರು

Office & Laboratory : # 133, Bhuvaneshwarinagar, Dodda Basti Main Road, Bangalore - 560 056.
e-mail:civilqualityconsultants@gmail.com Ph: 080-23240644 / Mob: 8553518550

Scanned by CamScanner

CIVIL QUALITY CONSULTANTS & ENGINEERS

(Buildings Geo-Tech & Highway Materials Testing Laboratory)
An ISO 9001: 2015 Certified Company
NABL Accredited As Per ISO/IEC : 17025:2005 Laboratory

JAS-ANZ
ISO 9001:2000 CERTIFIED

Job No.: CQCE/BBMP/MSV/QC/2018-19 Date : 28.02.2019

ATTERBERG LIMITS TEST FOR WMM
MORTH TABLE-400-11

Client : **Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.

Agency : **Sri. M S Venkatesh,** Contractor, Bangalore.

Name of Work : Improvements of re-asphalting Dasarahalli Main Road & other Roads , S Ramaiash, Ganesha Sawmill, Kempegowda Nagara & Maheshwari Nagara Roads Construction drain and Concrete Main roads &Cross roads of Vidyanagara Dasarahalli Ward No:15&39 (6-works) Package No. DZ 2017-18-(05), BBMP, Bangalore.

Name of Road : Improvements of re-asphalting Kempegowda Nagara & Maheshwari Nagara Roads Dasarahalli ward no.15.

Date of Testing : 28.02.2019

Material Type : Wet Mix Macadam

As per MORTH Table 400-13

Sl. No.	Particulars	Test Results	Standards as per Specifications
1	Liquid Limit	23.00	-
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL QUALITY CONSULTANTS & ENGINEERS

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ದಾಸರಹಳ್ಳಿ ಉಪ-ವಿಭಾಗ
ಬಾಗಲಗುಂಟೆ, ಬಿಬಿಎಂಪಿ
ಬೆಂಗಳೂರು

Authorised Signatory

Office & Laboratory : # 133, Bhuvaneshwarinagar, Dodda Basti Main Road, Bangalore - 560 056.
e-mail:civilqualityconsultants@gmail.com Ph: 080-23240644 / Mob: 8553518550

Scanned by CamScanner

CIVIL QUALITY CONSULTANTS & ENGINEERS

(Buildings Geo-Tech & Highway Materials Testing Laboratory)
An ISO 9001: 2015 Certified Company
NABL Accredited As Per ISO/IEC : 17025:2005 Laboratory

JAS-ANZ
ISO 9001:2000 CERTIFIED

Job No.: CQCE/BBMP/MSV/QC/2018-19

Date: 14.03.2019

TEST REPORT

Client	:	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Agency	:	**Sri. M S Venkatesh,** Contractor, Bangalore.
Name of the work	:	Improvements of re-asphalting Dasarahalli Main Road & other Roads , S Ramaiash, Ganesha Sawmill, Kempegowda Nagara & Maheshwari Nagara Roads Construction drain and Concrete Main roads &Cross roads of Vidyanagara Dasarahalli Ward No:15&39 (6-works) Package No. DZ 2017-18-(05), BBMP, Bangalore.
Name of Road	:	Improvements of re-asphalting Kempegowda Nagara & Maheshwari Nagara Roads Dasarahalli ward no.15.
Source of location	:	Hot mix Plant, Bangalore
Date of testing	:	14.03.2019

The results of the tests conducted on the bitumen sample using for Bituminous Macadam

Sl. No	Description	Test Result	Requirement as per IS:73:2013
1	Penetration at 25 ^{0}C, 1/10 mm	69	60 to 70
2	Softening point, ^{0}C	48	Min. 45
3	Ductility at 27^{0}C, cm	100 >	Min. 50
4	Flash Point, ^{0}C	290	Min. 220

Note:

⇒ This test report shall not be reproduced except in full, without written approval of the laboratory.
⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory.
⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Authorised Signatory

ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬಿ ದಾಸರಹಳ್ಳಿ ಉಪ ವಿಭಾಗ
ಬಾಗಲಗುಂಟೆ, ಬೆಂಗಳೂರು
ಬೆಂಗಳೂರು

Office & Laboratory : # 133, Bhuvaneshwarinagar, Dodda Basti Main Road, Bangalore - 560 056.
e-mail:civilqualityconsultants@gmail.com Ph: 080-23240644 / Mob: 8553518550

Scanned by CamScanner

CIVIL QUALITY CONSULTANTS & ENGINEERS

(Buildings Geo-Tech & Highway Materials Testing Laboratory)
An ISO 9001: 2015 Certified Company
NABL Accredited As Per ISO/IEC : 17025:2005 Laboratory

JAS-ANZ
ISO 9001:2000 CERTIFIED

Job No.: CQCE/BBMP/MSV/QC/2018-19 Date: 14.03.2019

Aggregate Impact Value

IS: 2386 Part IV

Client	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Agency	**Sri. M S Venkatesh,** Contractor, Bangalore.
Name of the Work	Improvements of re-asphalting Dasarahalli Main Road & other Roads , S Ramaiash, Ganesha Sawmill, Kempegowda Nagara & Maheshwari Nagara Roads Construction drain and Concrete Main roads &Cross roads of Vidyanagara Dasarahalli Ward No:15&39 (6-works) Package No. DZ 2017-18-(05), BBMP, Bangalore.
Name of Road	Improvements of re-asphalting Kempegowda Nagara & Maheshwari Nagara Roads Dasarahalli ward no.15.
Source / Location	Hotmix Plant, Bangalore
Type of Mix	Bituminous Macadam
Date of Testing	14.03.2019

Sl No.	Details	Trial No. 1	Trial No. 2	Trial No. 3	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	376	378	380	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	84	86	88	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	292	292	292	
4	Aggregate Impact value = percent fines	22.34	22.75	23.16	
	100* (W_2/W_1)%				22.75

Comments:

→ Maximum allowable Aggregate Impact value for Bituminous Macadam is 30%

Note:

→ This test report should not be reproduced except in full, without written approval of the laboratory
→ The results indicated above are based on the tests carried out on the samples recieved in the laboratory
→ Any Query regarding the report must be reported within 30 days from the date of testing

For CIVIL QUALITY CONSULTANTS & ENGINEERS

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
ದಾಸರಹಳ್ಳಿ ಉಪ-ವಿಭಾಗ
ಬಾಂಗಳೂರು. ಪಾಲಿಕೆ

Authorised Signatory

Office & Laboratory : # 133, Bhuvaneshwarinagar, Dodda Basti Main Road, Bangalore - 560 056.
e-mail:civilqualityconsultants@gmail.com Ph: 080-23240644 / Mob: 8553518550

Scanned by CamScanner

CIVIL QUALITY CONSULTANTS & ENGINEERS

(Buildings Geo-Tech & Highway Materials Testing Laboratory)
An ISO 9001: 2015 Certified Company
NABL Accredited As Per ISO/IEC : 17025:2005 Laboratory

JAS-ANZ
ISO 9001:2000 CERTIFIED

Job No.: CQCE/BBMP/MSV/QC/2018-19

14.03.2019

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Agency	**Sri. M S Venkatesh,** Contractor, Bangalore.
Name of Work	Improvements of re-asphalting Dasarahalli Main Road & other Roads , S Ramaiash, Ganesha Sawmill, Kempegowda Nagara & Maheshwari Nagara Roads Construction drain and Concrete Main roads &Cross roads of Vidyanagara Dasarahalli Ward No:15&39 (6-works) Package No. DZ 2017-18-(05), BBMP, Bangalore.
Name of Road	Improvements of re-asphalting Kempegowda Nagara & Maheshwari Nagara Roads Dasarahalli ward no.15.
Technical Reference	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Bituminous Macadam
Date of Testing	14.03.2019

Result : Flakiness Index = **11.85%**

Elongation Index = **12.63%**

Result : Combined Flakiness & Elongation index **24.48%**

Note:
1. This test report should not be reproduced except in full, without written approval of the laboratory
2. The results indicated above are based on the tests carried out on the samples received in the laboratory
3. Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Authorised Signatory

ಸಹಾಯಕ ಕಾರ್ಯ ಪಾಲಕ ಅಭಿಯಂತರರು
ದಾಸರಹಳ್ಳಿ ಉಪ-ವಿಭಾಗ
ಬಾಗಲಗುಂಟೆ, ಬಿಬಿಎಂಪಿ
ಬೆಂಗಳೂರು

Office & Laboratory : # 133, Bhuvaneshwarinagar, Dodda Basti Main Road, Bangalore - 560 056.
e-mail:civilqualityconsultants@gmail.com Ph: 080-23240644 / Mob: 8553518550

Scanned by CamScanner

CIVIL QUALITY CONSULTANTS & ENGINEERS

(Buildings Geo-Tech & Highway Materials Testing Laboratory)
An ISO 9001: 2015 Certified Company
NABL Accredited As Per ISO/IEC : 17025:2005 Laboratory

JAS-ANZ
ISO 9001:2000 CERTIFIED

Job No.: CQCE/BBMP/MSV/QC/2018-19 **Date:** 14.03.2019

Specific Gravity And Water Absorption Test

IS: 2386 Part III

Client	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Agency	**Sri. M S Venkatesh,** Contractor, Bangalore.
Name of the Work	Improvements of re-asphalting Dasarahalli Main Road & other Roads , S Ramaiash, Ganesha Sawmill, Kempegowda Nagara & Maheshwari Nagara Roads Construction drain and Concrete Main roads &Cross roads of Vidyanagara Dasarahalli Ward No:15&39 (6-works) Package No. DZ 2017-18-(05), BBMP, Bangalore.
Name of Road	Improvements of re-asphalting Kempegowda Nagara & Maheshwari Nagara Roads Dasarahalli ward no.15.
Source / Location	Hotmix Plant, Bangalore.
Type of Mix	Bituminous Macadam
Date of Testing	14.03.2019

Sl. No.	Details	Notation	Test Number			Mean Value
			Test 1	Test 2	Test 3	
1	Weight of aggregate suspended in water with the basket	W_1 g	2023	2025	2027	
2	Weight of basket suspended in water	W_2 g	755	755	755	
3	Weight of saturated aggregate in water	$(W_1 - W_2) = W_s$ g	1268	1270	1272	
4	Weight of saturated surface dry aggregate in air	W_3 g	2016	2018	2020	
5	Weight of water equal to the volume of the aggregate	$(W_3 - W_S)$ g	752	752	752	
6	Weight of oven dried aggregate	W_4 g	2011	2012	2013	
7	Specific Gravity	$W_4/(W_3-W_S)$	2.689	2.690	2.691	2.690
8	Apparent Specific gravity	$W_4/(W_4-W_S)$	2.707	2.712	2.717	2.712
9	Water Absorption	$((W_3-W_4)*100)/W_4$	0.25%	0.30%	0.35%	0.30%

Comments:

→ Maximum allowable Aggregate Water absorption value for Bituminous Macadam is 2.0%

Note:

→ This test report should not be reproduced except in full, without written approval of the laboratory
→ The results indicated above are based on the tests carried out on the samples received in the laboratory
→ Any Query regarding the report must be reported within 30 days from the date of testing

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Authorised Signatory

Office & Laboratory : # 133, Bhuvaneshwarinagar, Dodda Basti Main Road, Bangalore - 560 056.
e-mail:civilqualityconsultants@gmail.com Ph: 080-23240644 / Mob: 8553518560

Scanned by CamScanner

CIVIL QUALITY CONSULTANTS & ENGINEERS

(Buildings Geo-Tech & Highway Materials Testing Laboratory)
An ISO 9001: 2015 Certified Company
NABL Accredited As Per ISO/IEC : 17025:2005 Laboratory

JAS-ANZ
ISO 9001:2000 CERTIFIED

Job No.: CQCE/BBMP/MSV/QC/2018-19 Date: 15.03.2019

Aggregate Gradation Test

IS : 2386 Part I

Client	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Agency	**Sri. M S Venkatesh,** Contractor, Bangalore.
Name of the work	Improvements of re-asphalting Dasarahalli Main Road & other Roads , S Ramaiash, Ganesha Sawmill, Kempegowda Nagara & Maheshwari Nagara Roads Construction drain and Concrete Main roads &Cross roads of Vidyanagara Dasarahalli Ward No:15&39 (6-works) Package No. DZ 2017-18-(05), BBMP, Bangalore.
Name of Road	Improvements of re-asphalting Kempegowda Nagara & Maheshwari Nagara Roads Dasarahalli ward no.15.
Sample ID	Hotmix Plant, Bangalore.
Type of Mix	Bituminous Macadam
Date of Testing	15.03.2019

5250 gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Grade-II As per MORTH	Remarks
26.5	0	0	0	100	100	Gradation satisfies Grade-II MORTH specification
19	326	6.21	6.21	93.79	90-100	
13.2	1640	31.24	37.45	62.55	56-88	
4.75	1528	29.10	66.55	33.45	16-36	
2.36	1256	23.92	90.48	9.52	4-19	
0.3	169	3.22	93.70	6.30	2-10	
0.075	55	1.05	94.74	5.26	0-8	

Total Weight of Sample: **5050** gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Grade-II As per MORTH	Remarks
26.5	0	0	0	100	100	Gradation satisfies Grade-II MORTH specification
19	284	5.62	5.62	94.38	90-100	
13.2	1463	28.97	34.59	65.41	56-88	
4.75	1539	30.48	65.07	34.93	16-36	
2.36	980	19.41	84.48	15.52	4-19	
0.3	526	10.42	94.89	5.11	2-10	
0.075	66	1.31	96.20	3.80	0-8	

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Note:

→ This test report should not be reproduced except in full, without written approval of the laboratory
→ The results indicated above are based on the tests carried out on the samples received in the laboratory
→ Any Query regarding the report must be reported within 30 days from the date of testing

Authorised Signatory

Office & Laboratory : # 133, Bhuvaneshwarinagar, Dodda Basti Main Road, Bangalore - 560 056.
e-mail:civilqualityconsultants@gmail.com Ph: 080-23240644 / Mob: 8553518550

Scanned by CamScanner

CIVIL QUALITY CONSULTANTS & ENGINEERS

(Buildings Geo-Tech & Highway Materials Testing Laboratory)
An ISO 9001: 2015 Certified Company
NABL Accredited As Per ISO/IEC : 17025:2005 Laboratory

JAS-ANZ
ISO 9001:2000 CERTIFIED

Job No.: CQCE/BBMP/MSV/QC/2018-19 Date: 15.03.2019

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS MACADAM MIX

AASHTO T 164 & AASHTO T 30

CLIENT	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
AGENCY	**Sri. M S Venkatesh,** Contractor, Bangalore.
NAME OF THE WORK	Improvements of re-asphalting Dasarahalli Main Road & other Roads , S Ramaiash, Ganesha Sawmill, Kempegowda Nagara & Maheshwari Nagara Roads Construction drain and Concrete Main roads &Cross roads of Vidyanagara Dasarahalli Ward No:15&39 (6-works) Package No. DZ 2017-18-(05), BBMP, Bangalore.
Name of Road	Improvements of re-asphalting Kempegowda Nagara & Maheshwari Nagara Roads Dasarahalli ward no.15.
SAMPLE I/D	Sample Supplied by Agency
DATE OF TESTING	15.03.2019

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	481.5	482
3. Weight of Asphalt and Mineral matter Extracted,	-	-
4. Weight of Mineral Matter, g	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	18.5	18.00
7. Bitumen content in %	3.70	3.60
8. Average	3.65	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Trail 1				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
26.5	0	0	0	100	100
19	25.6	5.32	5.32	94.68	90-100
13.2	146.8	30.49	35.80	64.20	56-88
4.75	179.3	37.24	73.04	26.96	16-36
2.36	65.2	13.54	86.58	13.42	4-19
0.3	36.4	7.56	94.14	5.86	2-10
0.075	14.8	3.07	97.22	2.78	0-8

SIEVE SIZE	Trail 2				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
26.5	0	0	0	100	100
19	26.4	5.28	5.28	94.72	90-100
13.2	145.8	29.16	34.44	65.56	56-88
4.75	166.9	33.38	67.82	32.18	16-36
2.36	65.8	13.16	80.98	19.02	4-19
0.3	56.3	11.26	92.24	7.76	2-10
0.075	12.4	2.48	94.72	5.28	0-8

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Note:

→ This test report should not be reproduced except in full, without written approval of the laboratory
→ The results indicated above are based on the tests carried out on the samples received in the laboratory
→ Any Query regarding the report must be reported within 30 days from the date of testing

Authorised Signatory

Office & Laboratory : # 133, Bhuvaneshwarinagar, Dodda Basti Main Road, Bangalore - 560 056.
e-mail:civilqualityconsultants@gmail.com Ph: 080-23240644 / Mob: 8553518550

Scanned by CamScanner

CIVIL QUALITY CONSULTANTS & ENGINEERS

(Buildings Geo-Tech & Highway Materials Testing Laboratory)
An ISO 9001: 2015 Certified Company
NABL Accredited As Per ISO/IEC : 17025:2005 Laboratory

JAS-ANZ
ISO 9001:2000 CERTIFIED

Job No.: CQCE/BBMP/MSV/QC/2018-19 Date: 22.03.2019

TEST REPORT

Client	:	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Agency	:	**Sri. M S Venkatesh,** Contractor, Bangalore.
Name of the work	:	Improvements of re-asphalting Dasarahalli Main Road & other Roads , S Ramaiash, Ganesha Sawmill, Kempegowda Nagara & Maheshwari Nagara Roads Construction drain and Concrete Main roads &Cross roads of Vidyanagara Dasarahalli Ward No:15&39 (6-works) Package No. DZ 2017-18-(05), BBMP, Bangalore.
Name of Road	:	Improvements of re-asphalting Kempegowda Nagara & Maheshwari Nagara Roads Dasarahalli ward no.15.
Source of location	:	Hot mix Plant, Bangalore
Date of testing	:	22.03.2019

The results of the tests conducted on the bitumen sample using for Bituminous Concrete

Sl. No	Description	Test Result	Requirement as per IS:73:2013
1	Penetration at 25 ^{0}C, 1/10 mm	65	60 to 70
2	Softening point, ^{0}C	49	Min. 40
3	Ductility at 27^{0}C, cm	100 >	Min. 75
4	Flash Point, ^{0}C	298	Min. 220

Note:

⇒ This test report shall not be reproduced except in full, without written approval of the laboratory.
⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory.
⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL QUALITY CONSULTANTS & ENGINEER

Authorised Signatory

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಡಿ ದಾಸರಹಳ್ಳಿ ಉಪ-ವಿಭಾಗ
ಬಾಗಲಗುಂಟೆ, ಬಿಬಿಎಂಪಿ
ಬೆಂಗಳೂರು

Office & Laboratory : # 133, Bhuvaneshwarinagar, Dodda Basti Main Road, Bangalore - 560 056.
e-mail:civilqualityconsultants@gmail.com Ph: 080-23240644 / Mob: 8553518550

Scanned by CamScanner

CIVIL QUALITY CONSULTANTS & ENGINEERS

(Buildings Geo-Tech & Highway Materials Testing Laboratory)
An ISO 9001: 2015 Certified Company
NABL Accredited As Per ISO/IEC : 17025:2005 Laboratory

JAS-ANZ
ISO 9001:2000 CERTIFIED

Job No.: CQCE/BBMP/MSV/QC/2018-19 Date: 22.03.2019

Aggregate Impact Value

IS: 2386 Part IV

Client	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Agency	**Sri. M S Venkatesh,** Contractor, Bangalore.
Name of the Work	Improvements of re-asphalting Dasarahalli Main Road & other Roads , S Ramaiash, Ganesha Sawmill, Kempegowda Nagara & Maheshwari Nagara Roads Construction drain and Concrete Main roads &Cross roads of Vidyanagara Dasarahalli Ward No:15&39 (6-works) Package No. DZ 2017-18-(05), BBMP, Bangalore.
Name of Road	Improvements of re-asphalting Kempegowda Nagara & Maheshwari Nagara Roads Dasarahalli ward no.15.
Source / Location	Hot Mix Plant, Bangalore
Type of Mix	Bituminous Concrete
Date of Testing	22.03.2019

Sl No.	Details	Trial No.		Average
		1	2	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	377	381	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	83	85	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	294	296	
4	Aggregate Impact value = percent fines 100* (W_2/W_1) percent	22.02	22.31	22.16

Comments:
→ Maximum allowable Aggregate Impact value for Bituminous Concrete is 24%

Note:
⇒ This test report should not be reproduced except in full, without written approval of the laboratory
⇒ The results indicated above are based on the tests carried out on the samples received in the laborat
⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Authorised Signatory

Office & Laboratory : # 133, Bhuvaneshwarinagar, Dodda Basti Main Road, Bangalore - 560 056.
e-mail:civilqualityconsultants@gmail.com Ph: 080-23240644 / Mob: 8553518550

Scanned by CamScanner

CIVIL QUALITY CONSULTANTS & ENGINEERS

(Buildings Geo-Tech & Highway Materials Testing Laboratory)
An ISO 9001: 2015 Certified Company
NABL Accredited As Per ISO/IEC : 17025:2005 Laboratory

JAS-ANZ
ISO 9001:2000 CERTIFIED

Job No.: CQCE/BBMP/MSV/QC/2018-19 22.03.2019

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Agency	**Sri. M S Venkatesh,** Contractor, Bangalore.
Name of Work	Improvements of re-asphalting Dasarahalli Main Road & other Roads , S Ramaiash, Ganesha Sawmill, Kempegowda Nagara & Maheshwari Nagara Roads Construction drain and Concrete Main roads &Cross roads of Vidyanagara Dasarahalli Ward No:15&39 (6-works) Package No. DZ 2017-18-(05), BBMP, Bangalore.
Name of Road	Improvements of re-asphalting Kempegowda Nagara & Maheshwari Nagara Roads Dasarahalli ward no.15.
Technical Reference	IS 2386(Part 1) 1963 (RA 2007)
Type of Mix	Bituminous Concrete
Date of Testing	22.03.2019

Result : Flakiness Index = **11.98%**

Elongation Index = **13.86%**

Result : Combined Flakiness & Elongation index **25.84%**

Comments:

→ Maximum allowable Flakiness & Elongation Index for Bituminous Concrete is 30%

Note:

→ This test report should not be reproduced except in full, without written approval of the laboratory

→ The results indicated above are based on the tests carried out on the samples recieved in the laboratory

→ Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Authorised Signatory

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಟಿ ದಾಸರಹಳ್ಳಿ ಉಪ-ವಿಭಾಗ
ಬಾಗಲಗುಂಟೆ, ಬಿಬಿಎಂಪಿ
ಬೆಂಗಳೂರು

Office & Laboratory : # 133, Bhuvaneshwarinagar, Dodda Basti Main Road, Bangalore - 560 056.
e-mail:civilqualityconsultants@gmail.com Ph: 080-23240644 / Mob: 8553518550

Scanned by CamScanner

CIVIL QUALITY CONSULTANTS & ENGINEERS

(Buildings Geo-Tech & Highway Materials Testing Laboratory)
An ISO 9001: 2015 Certified Company
NABL Accredited As Per ISO/IEC : 17025:2005 Laboratory

JAS-ANZ
ISO 9001:2000 CERTIFIED

Job No: CQCE/BBMP/MSV/QC/2018-19 22.03.2019

Specific Gravity And Water Absorption Test
IS: 2386 Part III

Client	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Agency	**Sri. M S Venkatesh,** Contractor, Bangalore.
Name of the Work	Improvements of re-asphalting Dasarahalli Main Road & other Roads , S Ramaiash, Ganesha Sawmill, Kempegowda Nagara & Maheshwari Nagara Roads Construction drain and Concrete Main roads &Cross roads of Vidyanagara Dasarahalli Ward No:15&39 (6-works) Package No. DZ 2017-18-(05), BBMP, Bangalore.
Name of Road	Improvements of re-asphalting Kempegowda Nagara & Maheshwari Nagara Roads Dasarahalli ward no.15.
Type of Mix	Bituminous Concrete
Date of Testing	22.03.2019

Sl. No.	Details	Notation	Test Number			Mean Value
			Test 1	Test 2	Test 3	
1	Weight of aggregate suspended in water with the basket	W_1 g	2021	2023	2025	
2	Weight of basket suspended in water	W_2 g	754	754	754	
3	Weight of saturated aggregate in water	$(W_1 - W_2) = W_s$ g	1267	1269	1271	
4	Weight of saturated surface dry aggregate in air	W_3 g	2016	2018	2020	
5	Weight of water equal to the volume of the aggregate	$(W_3 - W_S)$ g	753	753	753	
6	Weight of oven dried aggregate	W_4 g	2009	2010	2011	
7	Specific Gravity	$W_4/(W_3-W_S)$	2.682	2.684	2.685	2.684
8	Apparent Specific gravity	$W_4/(W_4-W_S)$	2.708	2.713	2.718	2.713
9	Water Absorption	$((W_3-W_4)*100)/W_4$	0.35%	0.40%	0.45%	0.40%

Comments:
→ Maximum allowable Aggregate Water absorption value for Bituminous Concrete is 2.0%

Note:
⇒ This test report should not be reproduced except in full, without written approval of the laboratory
⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory
⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL QUALITY CONSULTANTS & ENGINEERS

ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ದಾಸರಹಳ್ಳಿ ಉಪ-ವಿಭಾಗ
ಬಾಂಗಳೂರು. ಬಬಿಎಂಪಿ

Authorised Signatory

Office & Laboratory : # 133, Bhuvaneshwarinagar, Dodda Basti Main Road, Bangalore - 560 056.
e-mail:civilqualityconsultants@gmail.com Ph: 080-23240644 / Mob: 8553518550

Scanned by CamScanner

CIVIL QUALITY CONSULTANTS & ENGINEERS

(Buildings Geo-Tech & Highway Materials Testing Laboratory)
An ISO 9001: 2015 Certified Company
NABL Accredited As Per ISO/IEC : 17025:2005 Laboratory

JAS-ANZ
ISO 9001:2000 CERTIFIED

Job No.: CQCE/BBMP/MSV/QC/2018-19 Date: 23.03.2019

TEST REPORT ON STABILITY OF MIX

Client	:	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Agency	:	**Sri. M S Venkatesh,** Contractor, Bangalore.
Name of the Work	:	Improvements of re-asphalting Dasarahalli Main Road & other Roads , S Ramaiash, Ganesha Sawmill, Kempegowda Nagara & Maheshwari Nagara Roads Construction drain and Concrete Main roads &Cross roads of Vidyanagara Dasarahalli Ward No:15&39 (6-works) Package No. DZ 2017-18-(05), BBMP, Bangalore.
Name of Road	:	Improvements of re-asphalting Kempegowda Nagara & Maheshwari Nagara Roads Dasarahalli ward no.15.
Source of location	:	Hot mix Plant, Bangalore
Type of Mix	:	Bituminous Concrete
Date of Testing	:	23.03.2019

The results of the tests conducted on the bituminous concrete mix sample are as follows:

Sl. No	Description	Test Result 1	Test Result 2	Requirement as per MORTH (Table 500-19)
1	Marshal Stability, Kn	9.89	10.20	9 Kn (min)
2	Marshal flow, mm	2.68	3.15	2 – 4
3	Percent air voids in Mineral Aggregate	13.96	14.21	13 – 15
4	Voids in Compacted Mix	3.59	4.52	3 – 6
5	Percent Voids filled with Bitumen	70.12	69.36	65 - 75
6	Density, g/cc	2.27	2.26	--

Note:

⇒ This test report shall not be reproduced except in full, without written approval of the laboratory.

⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL QUALITY CONSULTANTS & ENGINEERS

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ದಾಸರಹಳ್ಳಿ ಉಪ-ವಿಭಾಗ
ಬಾಗಲಗುಂಟೆ, ಬಿಬಿಎಂಪಿ

Authorised Signatory

Office & Laboratory : # 133, Bhuvaneshwarinagar, Dodda Basti Main Road, Bangalore - 560 056.
e-mail:civilqualityconsultants@gmail.com Ph: 080-23240644 / Mob: 8553518550

Scanned by CamScanner

CIVIL QUALITY CONSULTANTS & ENGINEERS

(Buildings Geo-Tech & Highway Materials Testing Laboratory)
An ISO 9001: 2015 Certified Company
NABL Accredited As Per ISO/IEC : 17025:2005 Laboratory

JAS-ANZ
ISO 9001:2000 CERTIFIED

23.03.2019

Job No.: CQCE/BBMP/MSV/QC/2018-19

Aggregate Gradation Test

IS : 2386 Part I

Client	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Agency	**Sri. M S Venkatesh,** Contractor, Bangalore.
Name of theWork	Improvements of re-asphalting Dasarahalli Main Road & other Roads , S Ramaiash, Ganesha Sawmill, Kempegowda Nagara & Maheshwari Nagara Roads Construction drain and Concrete Main roads &Cross roads of Vidyanagara Dasarahalli Ward No:15&39 (6-works) Package No. DZ 2017-18-(05), BBMP, Bangalore.
Name of Road	Improvements of re-asphalting Kempegowda Nagara & Maheshwari Nagara Roads Dasarahalli ward no.15.
Sample I / D	Hot Mix Plant, Bangalore
Type of Mix	Bituminous Concrete
Date of Testing	23.03.2019

Total Weight of Sample: **5000** gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	JOBMIX Gradation as per MORTH	Remarks
19	0	0	0	100	100	Gradation satisfies Bituminous concrete Grade-II specification as per MORTH
13.2	336	6.72	6.72	93.28	79 - 100	
9.5	560	11.20	17.92	82.08	70 - 88	
4.75	758	15.16	33.08	66.92	53 - 71	
2.36	620	12.40	45.48	54.52	42 - 58	
1.18	549	10.98	56.46	43.54	34 - 48	
0.600	633	12.66	69.12	30.88	26 - 38	
0.300	298	5.96	75.08	24.92	18 - 28	
0.150	445	8.90	83.98	16.02	12 - 20	
0.075	430	8.60	92.58	7.42	4 - 10	

Total Weight of Sample: **5000** gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	JOBMIX Gradation as per MORTH	Remarks
19	0	0	0	100	100	Gradation satisfies Bituminous concrete Grade-II specification as per MORTH
13.2	378	7.56	7.56	92.44	79 - 100	
9.5	536	10.72	18.28	81.72	70 - 88	
4.75	740	14.80	33.08	66.92	53 - 71	
2.36	625	12.50	45.58	54.42	42 - 58	
1.18	523	10.46	56.04	43.96	34 - 48	
0.600	469	9.38	65.42	34.58	26 - 38	
0.300	334	6.68	72.10	27.90	18 - 28	
0.150	456	9.12	81.22	18.78	12 - 20	
0.075	526	10.52	91.74	8.26	4 - 10	

1203

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Note:

⇒ This test report should not be reproduced except in full, without written approval of the laboratory

⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory

Office & Laboratory : # 133, Bhuvaneshwarinagar, Dodda Basti Main Road, Bangalore - 560 056.
e-mail:civilqualityconsultants@gmail.com Ph: 080-23240644 / Mob: 8553518550

Scanned by CamScanner

CIVIL QUALITY CONSULTANTS & ENGINEERS

(Buildings Geo-Tech & Highway Materials Testing Laboratory)
An ISO 9001: 2015 Certified Company
NABL Accredited As Per ISO/IEC : 17025:2005 Laboratory

JAS-ANZ
ISO 9001:2000 CERTIFIED

Job No.: CQCE/BBMP/MSV/QC/2018-19 23.03.2019

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE

CLIENT	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
AGENCY	**Sri. M S Venkatesh,** Contractor, Bangalore.
NAME OF THE WORK	Improvements of re-asphalting Dasarahalli Main Road & other Roads , S Ramaiash, Ganesha Sawmill, Kempegowda Nagara & Maheshwari Nagara Roads Construction drain and Concrete Main roads &Cross roads of Vidyanagara Dasarahalli Ward No:15&39 (6-works) Package No. DZ 2017-18-(05), BBMP, Bangalore.
Name of Road	Improvements of re-asphalting Kempegowda Nagara & Maheshwari Nagara Roads Dasarahalli ward no.15.
SAMPLE I/D	Sample Supplied by Agency
DATE OF TESTING	23.03.2019

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	469	468.5
3. Weight of Asphalt and Mineral matter Extracted, g	31	31.5
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	29	31.5
7. Bitumen content in %	5.80	6.30
8. Average	6.05	

GRADATION AFTER EXTRACTION

TABLE - 1

SIEVE SIZE	Percent Passing, %		JOBMIX
mm	Sample 1	Sample 2	Gradation
19	100.00	100.00	100
13.2	93.46	94.58	79-100
9.5	82.56	83.68	70-88
4.75	66.63	67.18	53-71
2.36	52.53	53.64	42-58
1.18	40.35	41.89	34-48
0.6	30.63	31.65	26-38
0.3	22.28	23.46	18-28
0.15	15.56	16.84	12-20
0.075	7.10	6.36	4-10

Note:

⇒ This test report should not be reproduced except in full, without written approval of the laboratory
⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory
⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

FOR CIVIL QUALITY CONSULTANTS & ENGINEERS

Authorised Signatory

Office & Laboratory : # 133, Bhuvaneshwarinagar, Dodda Basti Main Road, Bangalore - 560 056.
e-mail:civilqualityconsultants@gmail.com Ph: 080-23240644 / Mob: 8553518550

Scanned by CamScanner